

IN THE CLAIMS

Please amend the claims as indicated in the claim listing below.

5 1. (previously presented) A method of data processing, comprising:

providing image-data in an image space that encodes light as a spaced-apart discrete input set with dead spaces between all input set elements wherein each element is windowed by a first window function;

10 transforming said light from the image space to a transform space utilizing a continuous optical Fourier transforming component;; and

windowing spatially discrete regions in the transform space with a second window function that is related to the first window function by a matching condition so that at least one of intensities and phases of transformed light in the transform space regions are proportional to coefficients of a discrete transform of the input set; and

15 detecting data carried by said transformed light at the spatially discrete regions.

2-3 (Cancelled)

20 4. (previously presented) A method according to claim 1, wherein windowing comprises using a matching component.

5-7 Cancelled)

25 8. (Previously presented) A method according to claim 1, comprising compressing or decompressing said data using a transform-type compression/decompression method that uses said transforming.

9-10 (Cancelled)

30 11. (Previously presented) A method according to claim 8, wherein said transforming comprises transforming using one or more optical elements which perform a block transform.

12. (Original) A method according to claim 11, wherein said one or more optical elements comprises a matrix of optical lens elements.

13. (Cancelled)

14. (Original) A method according to claim 11, wherein said one or more optical elements
5 comprises an element which performs a vector by matrix multiplication.

15. (Original) A method according to claim 11, wherein said one or more optical element
comprises a refractive element.

10 16. (Original) A method according to claim 15, wherein said refractive element comprises a bi-
refrangent material.

17 (Cancelled)

15 18. (Original) A method according to claim 11, wherein said one or more optical elements
comprises an element which generates a matrix product.

19. (Original) A method according to claim 18, wherein said matrix product comprises a triple
matrix product.

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20. (Cancelled)

21. (Previously presented) A method according to claim 8, wherein said compression is a
JPEG compression.

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22. (Previously presented) A method according to claim 8, wherein said compression is a
MPEG compression.

23. (Previously presented) A method according to claim 8, wherein said compression is a
30 wavelet compression.

24. (Previously presented) A method according to claim 8, wherein said data represents an
image sequence.

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25 -33 (Cancelled)

34. (Previously presented) A method according to claim 1, comprising post-processing said data to generate data that represents a transform other than a Fourier transform.

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35. (Original) A method according to claim 34, wherein said postprocessing comprises optically postprocessing.

36. (Previously presented) A method according to claim 34, wherein said postprocessing
10 comprises spatially modulating said light.

37 (Cancelled)

38. (Previously presented) A method according to claim 34, wherein said preprocessing
15 comprises mirroring said data.

39-102 (cancelled)